

WHAT IS CLAIMED IS:

1                   1.       A method for searching for a desired element in a document using a  
2 first sequence of elements from a related document, wherein the document is related by an  
3 expected similarity, wherein the first sequence of elements represents an ordered list of  
4 elements where each element is from a predetermined set of elements, the method  
5 comprising:

6                   (a) building a second sequence of elements from the document, wherein the  
7 second sequence of elements represents an ordered list of elements where each element is  
8 from the predetermined set of elements;

9                   (b) generating one or more search queries from the first sequence of elements;

10                  (c) comparing the second sequence of elements with the one or more search  
11 queries to produce one or more comparison results; and

12                  (d) determining the desired element in the document from the one or more  
13 comparison results.

1                   2.       The method of claim 1, wherein determining one or more search  
2 queries from the first sequence of elements comprises determining a tolerance level and using  
3 the tolerance level to determine the one or more search queries.

1                   3.       The method of claim 2, wherein determining one or more search  
2 queries from the first sequence of elements comprises building the one or more search queries  
3 of a length equal to the tolerance level.

1                   4.       The method of claim 3, further comprising:  
2 determining a new tolerance level if the desired element cannot be determined  
3 from the one or more comparison results; and  
4 building the one or more search queries of a length equal to the new tolerance  
5 level.

1                   5.       The method of claim 1, further comprising performing at least steps  
2 (b), (c), and (d) a plurality of times to determine the desired element.

1                   6.       The method of claim 1, wherein determining the desired element from  
2 one or more comparison results comprises determining the desired element from an exact  
3 match between a search query and the second sequence of elements.

1                   7.       The method of claim 1, wherein determining the desired element from  
2 one or more query results comprises determining a best match between one or more search  
3 queries and the second sequence of elements.

1                   8.       The method of claim 7, wherein determining the best match between  
2 the search query and the second sequence of elements comprises counting a number of  
3 matches per element for each search query and the second sequence of elements.

1                   9.       The method of claim 8, wherein determining the best match between  
2 the search query and the second sequence of elements comprises choosing the search query  
3 with a highest number of matches as the best match.

1                   10.      The method of claim 7, wherein determining the best match between  
2 the search query and the second sequence of elements comprises choosing a search query  
3 with a position of the desired element closest to a position of the desired element in the  
4 second sequence of elements as the best match.

1                   11.      The method of claim 1, further comprising constraining an element in  
2 the predetermined set of elements with an attribute associated with the element.

1                   12.      The method of claim 11, wherein searching the document for elements  
2 in the predetermined set of elements comprises searching for the constrained element and the  
3 attribute associated with the constrained element in the document.

1                   13.      The method of claim 1, further comprising searching for a target  
2 desired element based on the target desired element's relationship with the desired element.

1                   14.      The method of claim 1, further comprising storing the second sequence  
2 of elements.

1                   15.      The method of claim 1, wherein the predetermined set of elements  
2 comprises stable elements.

1                   16.      The method of claim 1, wherein the first and second sequences of  
2 elements comprise characters representing elements in the predetermined set of elements.

1 17. The method of claim 1, wherein the document comprises an HTML  
2 document.

1 18. A method for searching for a desired element found in a first document  
2 in a second document using a predetermined set of stable elements, the method comprising:

3 (a) building a first sequence of stable elements from the first document,  
4 wherein the first sequence of stable elements represents an ordered list of elements where  
5 each element is from the predetermined set of stable elements;

6 (b) building a second sequence of stable elements from the second document,  
7 wherein the second sequence of stable elements represents an ordered list of elements where  
8 each element is from the predetermined set of stable elements;

9 (c) generating one or more search queries from the first string of stable  
10 elements;

11 (d) comparing the second sequence of elements with the one or more search  
12 queries to produce one or more comparison results; and

13 (e) determining the desired element in the second document from the one or  
14 more comparison results.

1 19. The method of claim 18, wherein generating one or more search  
2 queries from the first sequence of elements comprises determining a tolerance level and using  
3 the tolerance level to determine the one or more search queries.

1 20. The method of claim 19, wherein generating one or more search  
2 queries from the first sequence of elements comprises building the one or more search queries  
3 of a length equal to the tolerance level.

1 21. The method of claim 20, further comprising:  
2 determining a new tolerance level if the desired element cannot be determined  
3 from the one or more comparison results; and  
4 generating the one or more search queries of a length equal to the new  
5 tolerance level.

1 22. The method of claim 18, further comprising performing at least steps  
2 (c), (d), and (e) a plurality of times to determine the desired element.

1                   23.     The method of claim 18, wherein determining the desired element  
2 from one or more query results comprises determining the desired element from an exact  
3 match between a search query and the second sequence of stable elements.

1                   24.     The method of claim 18, wherein determining the desired element  
2 from one or more query results comprises determining a best match between one or more  
3 search queries and the second sequence of stable elements.

1                   25.     The method of claim 24, wherein determining the best match between  
2 the search query and the second sequence of stable elements comprises counting a number of  
3 matches per element for each search query and the second sequence of stable elements.

1                   26.     The method of claim 25, wherein determining the best match between  
2 the search query and the second sequence of stable elements comprises choosing the search  
3 query with a highest number of matches as the best match.

1                   27.     The method of claim 24, wherein determining the best match between  
2 the search query and the second sequence of stable elements comprises choosing a search  
3 query with a position of the desired element closest to a position of the desired element in the  
4 second sequence of stable elements as the best match.

1                   28.     The method of claim 18, further comprising constraining a stable  
2 element in the predetermined set of stable elements with an attribute associated with the  
3 stable element.

1                   29.     The method of claim 28, wherein building a first sequence of stable  
2 elements comprises searching for the constrained stable element and the attribute associated  
3 with the constrained stable element in the first document.

1                   30.     The method of claim 28, wherein building a second sequence of stable  
2 elements comprises searching for the constrained stable element and the attribute associated  
3 with the constrained stable element in the second document.

1                   31.     The method of claim 18, further comprising searching for a target  
2 desired element based on the target desired element's relationship with the desired element.

1                   32.    The method of claim 18, further comprising storing the second  
2 sequence of stable elements.

1                   33.    The method of claim 18, wherein the first sequence of stable elements  
2 is a sequence of characters representing elements in the predetermined set of stable elements.

1                   34.    The method of claim 18, wherein the first and second documents  
2 comprise an HTML document.

1                   35.    A method for searching for a desired element found in a first document  
2 in a second document using a user interface, the method comprising:

3                    selecting the desired element in the first document using the user interface;  
4                    determining a set of stable elements based on the selected desired element;  
5                    building a first sequence of stable elements from the first document, wherein  
6 the first sequence of stable elements represents an ordered list of elements where each  
7 element is from the set of stable elements;

8                    building a second sequence of stable elements from the second document,  
9 wherein the second sequence of stable elements represents an ordered list of elements where  
10 each element is from the set of stable elements;

11                   determining one or more search queries from the first sequence of elements;

12                   comparing the second sequence of elements with the one or more search  
13 queries to produce one or more comparison results; and

14                   determining the desired element in the second document from one or more  
15 comparison results.

1                   36.    The method of claim 35, wherein determining a set of stable elements  
2 comprises using a default set of stable elements.

1                   37.    The method of claim 35, wherein determining a set of stable elements  
2 comprises choosing elements using the user interface to determine the set of stable elements.